

# FELDUN-PURDUE AGRICULTURAL CENTER RESEARCH AND DEMONSTRATION PROJECTS 2024

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<https://ag.purdue.edu/department/arge/PACs/fpac/fpac.html>

## Department of Agronomy

### **Purdue Automated Agricultural Weather Station (PAAWS)**

Purpose: Automated collection of weather data from this site is sent to the Indiana State Climate Office at Purdue University - data can be observed at: <http://climate.agry.purdue.edu>

Contact: Beth Hall, Department of Agronomy

## Department of Animal Sciences

### **Indiana Beef Evaluation Program (IBEP)**

Purpose: Provide a common environment for growing young bulls from cooperators in Indiana as well as surrounding states. To provide a source of superior, performance tested bulls to commercial cattlemen intent on improving their herds.

Contact: Nick Minton, Department of Animal Sciences

### **Cross-Breed EPD Development Collaboration with Simmental Assoc**

Purpose: Early 2000's American Simmental Assoc wanted to develop cross-breeding EPDs and was looking for large commercial herds with phenotypic data. Feldun maintains a Simmental x Angus cow herd. Feldun has provided pedigree and phenotypic back to the early 1980s and continues to provide data from birth until death, or until the animal is culled. Approximately 8000 animal points and 1300 DNA samples have been submitted to the Simmental Assoc to help with this effort.

Contact: Brad Shelton, Feldun Purdue Ag Center

### **Select Sires – Young Sires Program Collaboration**

Purpose: Provide unbiased data on newer herd sires that Select Sires has added to their stud line up. Feldun utilizes sires through the AI program that suit the needs of the cow herd. Data from birth through slaughter, for steers, is provided to Select Sires.

Contact: Brad Shelton, Feldun Purdue Ag Center

### **Soybean supplementation following timed-artificial insemination in beef heifers on fresh pasture**

Purpose: Determine the effectiveness supplementing soybean hull pellets of heifers grazing washy pasture immediately after insemination.

Contact: Ron Lemenager and Nick Minton, Department of Animal Science

## **Department of Animal Sciences (continued)**

### **Measuring Individual Forage Intake of Replacement Heifers**

Purpose: Animals can have the same genetics and same average daily gain but eat drastically different amounts of feed. The project collected weights every time heifers drank from the Vytelle system.

Contact: Matt Wilson, West Virginia University, Department of Animal Science

## **Department of Botany & Plant Pathology**

### **Corn and Soybean Disease Sentinel Plots**

Purpose: To monitor for the on-set of various diseases in corn and soybeans throughout the growing season.

Contact: Darcy Telenko, Department of Botany and Pathology

## **Department of Entomology**

### **Insect Pest Monitoring Network**

Purpose: Monitor insect pests of corn, soybean, wheat, and pastures.

Contact: John Obermeyer and Laura Ingwell, Department of Entomology

## **Department of Forestry & Natural Resources**

### **Forest Inventory Studies**

Purpose: Provides location for woodland research activity across the 234 acres of forest at the Feldun-Purdue Agricultural Center. Current effort includes forest inventory. Feldun-PAC possesses mature woods with a long data base history dating back to the early 1950's.

Contact: Don Carlson, Department of Forestry & Natural Resources

### **Wildlife Monitoring with UAVs**

Purpose: Conduct aerial surveys with UAVs to estimate the density of deer, turkey, coyote at the PACs as part of a larger survey with DNR across Indiana.

Contact: Pat Zollman – Department of Forestry and Natural Resources

## **Collaborations**

### **National Weather Service Station (NWS)**

Purpose: Manual collection of daily weather observations from this site are sent to the NWS via a web-based application known as WxCoder. Data has been recorded at Feldun since 1893.

Contact: Brad Herold, National Weather Service

### **U.S. Surface Climate Reference Network (USCRN)**

Purpose: Provide a continuous series of climate observations for monitoring trends in the nation's climate and for supporting climate-impact research

Contact: National Centers for Environmental Information.

## **Collaborations (continued)**

### **Effectiveness of Annual Ryegrass to mitigate negative effects of fragipan soils.**

Purpose: Establishment of annual ryegrass on fragipan soils and measure differences in soybean production as compared to no ryegrass treatment. Measure fragipan depths overtime.

Contact: Brad Shelton, Feldun Purdue Ag Center; Claire Phillips – USDA/ARS – Ames, IA

### **Remote Sensing Technology To Manage Pasture Forages**

Purpose: Utilizing satellite imagery and proofing it with the Enriched Ag camera system mounted to a UTV, a forage management plan can be designed and used to monitor for arising issues due to drought, prevent overgrazing and improve forage utilization.

Contact: Mike Komp, Enriched Ag